

REMARKS

Claims 1-36 are pending in the instant application. Claims 1-34 presently stand rejected. Claims 1, 4, 18, and 21 are amended herein. Claims 35 and 36 are newly presented. Entry of this amendment and reconsideration of the pending claims are respectfully requested.

Status of Claim 8

The Final Office Action mailed 12/14/07 did not indicate the status of claim 8. No rejection of claim 8 was presented; however, no indication of allowability was present either. Applicants respectfully request that the Examiner clearly indicate the status of claim 8 along with a supporting rationale so that Applicants can have a fair opportunity to respond.

Claim Rejections – 35 U.S.C. § 102

Claims 1-7, 9-13, and 16-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Agilent Technologies product notes, January 2002 (hereafter “Agilent”).

A claim is anticipated only if each and every element of the claim is found in a single reference. M.P.E.P. § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987)). “The identical invention must be shown in as complete detail as is contained in the claim.” M.P.E.P. § 2131 (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989)).

Independent Claims 1, 4, and 18

Amended independent claim 1 now recites, in pertinent part,

a media independent interface (MII) coupled to the MAC to at least one of transmit and receive data at a data rate;

a plurality of data lane interfaces, each data lane interface being capable of at least one of transmitting a serial data signal to and receiving a serial data signal from a data lane in a device-to-device interconnection; and

a transmitter coupled to the MII to receive data from the MII and coupled to selectively transmit the data to one or more of the data lane interfaces at a variable rate dependent upon a number of the data lane interfaces to which the transmitter is transmitting the data.

Applicants respectfully submit that Agilent fails to disclose a transmitter coupled to receive data from a MII and coupled to selectively transmit the data to one or more data lane interfaces at a variable rate dependent upon a number of the data lane interfaces actively operating.

To be sure, the Office Action mailed 12/14/07 cites the XGMII interfaces illustrated in FIG. 1 as corresponding to the claimed “MII” and cites the XAUI interfaces illustrated in FIG. 3.10 as corresponding to the claimed “plurality of data lane interfaces.” The Office Action then states, “because no structural element of the logic was claimed in the claim, therefore reference only need to be capable varying the data rate.” Finally, the Office Action states that since test device 71612C is capable of outputting a $\frac{1}{4}$ main clock rate, it must be able to generate and capture various data rates on the XAUI interface data lines.

No portion of Agilent discloses that the Xenpak module or device under test (DUT) includes a transmitter that is coupled to received data from a MII and selectively transmit the data to one or more data lane interfaces at a variable rate. Furthermore, no portion of Agilent discloses a transmitter that outputs data at a variable rate dependent upon a number of data lane interfaces to which the transmitter is transmitting.

In fact, FIG. 8 of Agilent illustrates the Xenpak module or DUT as capable of receiving four 3.125 Gb/s signals along XAUI inputs 0-3 and outputting a 10 Gb/s optical signal. Agilent further discloses that the test unit 71612C outputs the signals coupled to the XAUI inputs 0-3 each at $\frac{1}{4}$ its main serial output rate. However, nowhere does Agilent disclose that either test unit 71612C or the DUT is capable of selectively transmitting data at a variable rate. In fact, Agilent teaches the opposite. The XAUI inputs 0-3 are all disclosed as fixed 3.125 Gb/s signals and the optical TX and RX are disclosed as fixed 10 Gb/s signals. **Agilent certainly does not disclose a transmitter coupled to (or even a transmitter being capable of) adjust the data rate of any signal dependent upon a number of data lanes to which the signal is being transmitted.**

Claim 1 has been amended to recite a “transmitter” coupled to selectively transmit data to one or more data lane interfaces at a variable rate. A coupled transmitter constitutes “structural elements,” which the Examiner cannot ignore. In short, Agilent

does not disclose a transmitter coupled to receive data from a MII and coupled to **selectively** transmit data to one or more data lane interfaces. Furthermore, Agilent does not disclose a transmitter coupled to transmit data at a variable rate dependent upon how many data lane interfaces it is transmitting to.

Finally, Applicants note that the Office Action has attempted to read the claims of the instant application on the test equipment 71612C illustrated in FIG. 8 of Agilent. However, test equipment 71612C is not coupled to receive data from a MAC via an MMI. In short, test equipment 71612C simply does not satisfy the elements of the claims. Rather, it appears that the Examiner is engaging in impermissible hindsight rationales using the Applicants' disclosure as a roadmap to piece together the prior art in a contorted manner in an attempt to satisfy the elements of the claims. The Office Action begins by cites internal elements of the Xenpak module (DUT) illustrated in FIGs. 3.1 and 7 as teaching a first portion of the claims, and then cites functions of test equipment 71612C illustrated in FIG. 8 as teaching a second portion of the claims. However, test equipment 71612C is a completely separate and discrete piece of equipment than the device it is testing.

Consequently, Agilent fails to disclose each and every element of claim 1, as required under M.P.E.P. § 2131. Independent claim 18 now includes similar novel elements as independent claim 1 and independent claim 4 includes similar novel elements with respect to a receiver. Accordingly, withdrawal of the instant §102 rejections of claims 1, 4, and 18 is requested.

Independent Claim 11

Independent claim 11 recites, in pertinent part,

at least one of transmitting data to and receiving data from a media independent interface (MII) at a data rate;
at least one transmitting a serial data signal to and receiving a serial data signal from one or more data lanes in a device-to-device interconnection, each data lane being coupled to the MII by an associated data lane interface;
and
varying the data rate based, at least in part, upon a number of the data lane interfaces actively transmitting a serial data signal to or actively receiving a serial data signal from the device-to-device interconnection.

Applicants note that independent claim 11 is a “method” claim and therefore need not recite “structural elements” as suggested in the Office Action. As such, the Examiner’s burden when formulating a rejection for independent claim 11 is not simply to find a device which the Examiner believes is capable of performing the method; rather, as required under MPEP § 2131, the identical invention must be shown in as complete detail as is contained in the claim. As discussed above, no portion of Agilent discloses that either test unit 71612C or the DUT varies a data rate dependent upon a number of data lane interfaces actively transmitting a serial data signal. In fact, Agilent teaches the opposite. The XAUI inputs 0-3 are all disclosed as fixed 3.125 Gb/s signals and the optical TX and RX are disclosed as fixed 10 Gb/s signals.

Consequently, Agilent fails to disclose each and every element of claim 11, as required under M.P.E.P. § 2131. Accordingly, withdrawal of the instant §102 rejection of claim 11 is requested.

Dependent Claims

The dependent claims are novel over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims, in addition to adding further limitations of their own. Accordingly, Applicants respectfully request that the instant § 102 rejections of the dependent claims be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being anticipated by Agilent, in view of Samudrala (US 2005/0013311 A1).

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being anticipated by Agilent, in view of January 1997 National Semiconductor publication, pages 1-14.

Claims 21-29 and 30-34 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Agilent, in view of Actel Publication Notes (hereafter “Actel”).

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be

considered in judging the patentability of that claim against the prior art.” M.P.E.P. § 2143.03.

Amended independent claim 21 now recites, in pertinent part,

wherein the PMD section is coupled to the PCS section to signal to the PCS section a number of the data lane interfaces actively transmitting a serial data signal

Applicants respectfully submit no portion of Agilent or Actel discloses a PMD section coupled to a PCS to signal a number of data lane interfaces actively transmitting serial data. Consequently, the combination of Agilent & Actel fails to teach or suggest all elements of claim 21, as required under M.P.E.P. § 2143.03. Accordingly, Applicants request that the instant §103(a) rejections of claims 21 be withdrawn.

Independent claim 30 recites, in pertinent part,

varying the data rate based, at least in part, upon a number of the data lane interfaces actively transmitting a serial data signal to or receiving a serial data signal from the device-to-device interconnection.

Applicants note that independent claim 30 is a “method” claim and therefore need not recite “structural elements” as suggested in the Office Action. As such, the Examiner’s burden when formulating a rejection for independent claim 30 is not simply to find a device which the Examiner believes is capable of performing the method; rather, to establish prima facie obviousness, all the claim limitations must be taught or suggested by the prior art and all words in a claim must be considered in judging the patentability of that claim against the prior art. As discussed above, no portion of Agilent discloses that either test unit 71612C or the DUT varies a data rate dependent upon a number of data lane interfaces actively transmitting a serial data signal. In fact, Agilent teaches the opposite. The XAUI inputs 0-3 are all disclosed as fixed 3.125 Gb/s signals and the optical TX and RX are disclosed as fixed 10 Gb/s signals. Actel also fails to teach or suggest this very same element.

Consequently, the combination of Agilent & Actel fails to teach or suggest all elements of claim 30, as required under M.P.E.P. § 2143.03. Accordingly, Applicants request that the instant §103(a) rejections of claims 30 be withdrawn.

The dependent claims are nonobvious over the prior art of record for at least the same reasons as discussed above in connection with their respective independent claims,

in addition to adding further limitations of their own. Accordingly, Applicants respectfully request that the instant § 103 rejections of the dependent claims be withdrawn.

New Claims

Applicants note that new dependent claims 35 and 36 have been added. Applicants submit that the cited prior art fails to disclose, teach, or suggest communicating a number of data lane interfaces actively transmitting a serial data signal (claim 35) and also fail to disclose, teach, or suggest a transmitter state machine coupled to receive a clock signal having a frequency dependent upon a number of data lane interfaces actively transmitting a serial data signal (claim 36).

CONCLUSION

In view of the foregoing amendments and remarks, it is believed that the applicable rejections have been overcome and all claims remaining in the application are presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative at (206) 292-8600 if the Examiner believes that an interview might be useful for any reason.

CHARGE DEPOSIT ACCOUNT

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

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